

WHAT IS CLAIMED IS:

1. An optical interface for an appliance using indicator lights comprising:
a first group of indicator lights coupled to a first common control component for controlling the indicator lights in the first group;
a second group of indicator lights coupled to a second common control component for controlling the indicator lights in the second group;
a first selector for selecting one of the indicator lights in the first group of indicator lights as an optical transmitter for transmitting a light signal from the appliance; and
a second selector for selecting one of the indicator lights in the second group of indicator lights as an optical receiver for receiving a light signal.
2. The optical interface of claim 1 wherein the first common control component is a transistor and a data signal sent to the base of the transistor controls the transmission of a light signal through the indicator light selected for operation as an optical transmitter.
3. The optical interface of claim 1 wherein the first selector is an output of a microcontroller coupled to the indicator light selected for operation as an optical transmitter.

4. The optical interface of claim 1 wherein the second selector is an output of a microcontroller coupled to the indicator light selected for operation as an optical receiver.

5. The optical interface of claim 1 further comprising:

a microcontroller coupled to the first common component, the microcontroller driving the first common control component with a data signal to generate a light signal with the indicator light selected in the first group of indicator lights to operate as an optical transmitter.

6. The optical interface of claim 1 further comprising:

a transistor coupled to the indicator light selected for operation as an optical receiver, the transistor for generating an electrical data signal that corresponds to the optical signal received by the indicator light selected for operation as an optical receiver.

7. The optical interface of claim 6 wherein the microcontroller includes a receive data input that is coupled to the collector of the transistor to receive the generated electrical data signal.

8. The optical interface of claim 1 wherein the indicator light selected from the first group of indicator lights and the indicator light selected from the second group of indicator lights are in proximity to one another.

9. The optical interface of claim 1 wherein the first selector is an output of a microcontroller coupled to the indicator light selected for operation as an optical transmitter and a data signal is sent on the first selector to selectively bias the indicator light selected for operation as an optical transmitter for transmission of a light signal through the selected indicator light.

10. The optical interface of claim 9 wherein the first common control component is a transistor controlled by another microcontroller output to enable operation of the selected indicator light as an optical transmitter.

11. The optical interface of claim 9 wherein the second selector is an output of a microcontroller coupled to the indicator light selected for operation as an optical receiver.

12. A method for optically interfacing an appliance to an external device using indicator lights of the appliance comprising:

selecting one indicator light in a first group of indicator lights as an optical transmitter for an appliance; and

selecting one indicator light in a second group of indicator lights as an optical receiver for receiving a light signal for the appliance.

13. The method of claim 12 further comprising:

generating an optical signal with the optical transmitter

14. The method of claim 13, the optical signal generation further comprising:

sending a data signal to a common control component for the first group of indicator lights to generate the optical signal.

15. The method of claim 14 wherein sending the data signal to the common control component further comprises:

sending the data signal to the base of a transistor that controls the first group of indicator lights.

16. The method of claim 12 further comprising:

generating an electrical data signal from the response of the indicator light selected for operation as an optical receiver.

17. The method of claim 16, the electrical data signal generation further comprising:

selectively operating a transistor coupled to the indicator light selected for operation as an optical receiver.

18. The method of claim 12 further comprising:

sending a data signal on the first selector to selectively bias the indicator light selected for operation as an optical transmitter for transmission of a light signal through the selected indicator light.

19. The method of claim 18 further comprising:

sending a signal to the first common control component to enable operation of the selected indicator light as an optical transmitter.